| L Number | Hits    | Search Text  | DB        | Time stamp       |
|----------|---------|--|-----------|------------------|
| 7        | 10      | 347/65.ccls. and "MEMS" and "CMOS"   | USPAT;    | 2004/08/23 08:49 |
|          |         |  | EPO; JPO  |                  |
| 8        | 38      | piezoelectric and ("CMOS" near substrate)  | USPAT;    | 2004/08/23 08:51 |
|          |         |  | EPO; JPO  |                  |
| 9        | 5       | (piezoelectric and ("CMOS" near substrate)) and 347/\$.ccls.   | USPAT;    | 2004/08/23 08:50 |
|          |         | ,  | EPO; JPO  |                  |
| 10       | 23      | (piezoelectric and ("CMOS" near substrate)) and print\$3   | USPAT;    | 2004/08/23 09:02 |
|          |         |  | EPO; JPO  |                  |
| -        | 447     | 347/54   | USPAT;    | 2004/08/17 18:31 |
|          |         |  | EPO; JPO  |                  |
| _        | 6       | "4819009"  | USPAT;    | 2000/09/19 13:57 |
|          | -       |  | EPO; JPO  |                  |
| _        | 70055   | electromag\$ and coil  | USPAT;    | 2000/09/20 17:06 |
|          | , 5555  | and the second s | EPO; JPO  |                  |
| _        | 375000  | piston or plunger  | USPAT;    | 2000/09/20 17:07 |
|          | 0,0000  | ploton or plunger  | EPO; JPO  | 2000/00/20 1110/ |
|          | 9       | (347/54) and (electromag\$ and coil) and (piston or plunger)   | USPAT;    | 2000/09/20 17:17 |
| _        | 9       | (047704) and (electromagy and coil) and (piston or plunger)  | EPO; JPO  | 2000/00/20 17:11 |
|          | 50      | (347/\$.ccls.) and (electromag\$ and coil) and (piston or  | USPAT;    | 2000/09/20 17:17 |
| -        | 30      |  | EPO; JPO  | 2000/09/20 17.17 |
|          | 4404    | plunger)   | USPAT;    | 2000/09/22 12:43 |
| -        | 1191    | magnetostrictive adj (material or actuator)  |           | 2000/09/22 12:43 |
| ļ        | 445447  |  | EPO; JPO  | 2000/00/22 00:52 |
| -        | 145447  | magnetic adj field   | USPAT;    | 2000/09/22 09:53 |
|          |         |  | EPO; JPO  | 0000/00/00 44.40 |
| -        | 663     | (magnetostrictive adj (material or actuator)) and (magnetic  | USPAT;    | 2000/09/22 14:49 |
|          | _       | adj field)   | EPO; JPO  |                  |
| -        | 5       | 347/\$.ccls. and ((magnetostrictive adj (material or actuator))  | USPAT;    | 2000/09/22 14:48 |
|          |         | and (magnetic adj field))  | EPO; JPO  |                  |
| -        | 3       | magnetostrictive adj (paddle or diaphragm)   | USPAT;    | 2000/09/22 14:47 |
| ŀ        |         |  | EPO; JPO  |                  |
| -        | 108     | terfenol-D   | USPAT;    | 2000/09/22 14:48 |
|          |         |  | EPO; JPO  |                  |
|          | 0       | 347/\$.ccls. and ((magnetostrictive adj (material or actuator))  | USPAT;    | 2000/09/22 14:49 |
|          |         | and (magnetic adj field)) and terfenol-D   | EPO; JPO  |                  |
| -        | 60      | (magnetostrictive adj (material or actuator)) and (magnetic  | USPAT;    | 2000/09/22 15:30 |
|          |         | adj field) and terfenol-D  | EPO; JPO  |                  |
| -        | 39      | motamedi-\$.in.  | USPAT;    | 2000/09/22 15:30 |
|          |         |  | EPO; JPO  |                  |
| -        | 10544   | sma or (shape adj memory adj alloy)  | USPAT;    | 2000/09/25 15:00 |
|          |         |  | EPO; JPO  |                  |
| _        | 489     | martensitic adj phase  | USPAT;    | 2000/09/25 12:13 |
| ĺ        |         |  | EPO; JPO  |                  |
| -        | 587     | austenitic adj phase   | USPAT;    | 2000/09/25 12:14 |
|          |         |  | EPO; JPO  |                  |
| -        | 1       | ((sma or (shape adj memory adj alloy)) and (martensitic adj  | USPAT;    | 2000/09/25 12:14 |
|          |         | phase) and (austenitic adj phase)) and 347/\$.ccls.  | EPO; JPO  |                  |
| ] _      | 101     | (sma or (shape adj memory adj alloy)) and (martensitic adj   | USPAT;    | 2000/09/25 12:20 |
|          |         | phase) and (austenitic adj phase)  | EPO; JPO  |                  |
| -        | 3925    | sma or (shape adj memory adj alloy) and 347/\$.ccls.   | USPAT;    | 2000/09/25 15:00 |
|          |         |  | EPO; JPO  |                  |
| _        | 65      | (sma or (shape adj memory adj alloy)) and 347/\$.ccls.   | USPAT;    | 2000/09/25 15:03 |
|          |         |  | EPO; JPO  |                  |
| <u>-</u> | 4       | actuator and ((sma or (shape adj memory adj alloy)) and  | USPAT;    | 2000/09/25 15:05 |
|          |         | 347/\$.ccls.)  | EPO; JPO  |                  |
| _        | 3       | ejector and ((sma or (shape adj memory adj alloy)) and   | USPAT;    | 2000/09/25 15:06 |
|          |         | 347/\$.ccls.)  | EPO; JPO  |                  |
| _        | 9       | "0634273"  | USPAT;    | 2003/09/21 16:42 |
| _        |         |  | US-PGPUB; | -300,00,21 10.42 |
|          |         |  | EPO; JPO; |                  |
|          |         |  | DERWENT   |                  |
|          | 2001477 | on "634273" o2   | USPAT;    | 2003/09/21 16:43 |
| -        | 3991177 | ep "634273" a2   | US-PGPUB; | 2003/03/21 10,43 |
| [        |         |  |           |                  |
|          |         |  | EPO; JPO; |                  |
| i l      |         | I .  | DERWENT   |                  |

|     |      | F   |                      | 0000100101 10 10  |
|-----|------|---|----------------------|-------------------|
| -   | 10   | "634273"  | USPAT;               | 2003/09/21 16:43  |
|     |      |   | US-PGPUB;            |                   |
|     |      |   | EPO; JPO;            |                   |
|     |      | 11055707711   | DERWENT              | 2002/00/22 00:42  |
| -   | 4    | "6557977"   | USPAT;               | 2003/09/22 08:13  |
|     |      |   | US-PGPUB;            |                   |
|     |      |   | EPO; JPO;<br>DERWENT |                   |
|     | 0    | silverbrook-\$.in and (nozzle near (guard\$3 protect\$3))               | USPAT;               | 2004/08/02 17:57  |
| -   | ٥    | Silverbrook-\$.iii aliu (11022le flear (guaru\$5 protect\$5))           | EPO; JPO             | 2004/00/02 11.57  |
| _   | 108  | silverbrook-\$.in. and (nozzle near (guard\$3 protect\$3))              | USPAT;               | 2004/08/02 17:57  |
|     | 100  | Silverbrook with and (1102210 from (gadrage processes))                 | EPO; JPO             | 200 1700/02 11107 |
| _   | 29   | (silverbrook-\$.in. and (nozzle near (guard\$3 protect\$3))) and        | USPAT;               | 2004/08/02 18:31  |
|     |      | 347/54.ccls.  | EPO; JPO             |                   |
| -   | 159  | (MEMS near (substrate\$1 nozzle\$1 chamber\$1))                         | USPAT;               | 2004/08/17 18:40  |
|     |      |   | EPO; JPO             |                   |
| -   | 22   | ((MEMS near (substrate\$1 nozzle\$1 chamber\$1))) and                   | USPAT;               | 2004/08/02 18:33  |
| i   |      | 347/\$.ccls.  | EPO; JPO             |                   |
| -   | 11   | ("1941001"   "3373437"   "3416153"   "3946398"   "4346387"              | USPAT                | 2004/08/02 18:35  |
|     |      | "4894664"   "5812159"   "5825385"   "5880759"   "6079821"               |                      |                   |
| [   |      | "6312112").PN.  |                      |                   |
| i - | 1    | 6247790.pn.   | USPAT;               | 2004/08/17 18:35  |
|     |      |   | EPO; JPO             |                   |
| -   | 0    | MEMS same substrate\$1 same CMOS same (fluid near                       | USPAT;               | 2004/08/17 18:37  |
|     |      | channel\$1)   | EPO; JPO             | 0004/05/47 15 57  |
| -   | 26   | "MEMS" and (substrate\$1 same "CMOS") and (fluid near                   | USPAT;               | 2004/08/17 18:37  |
|     |      | channel\$1)   | EPO; JPO             |                   |
| -   | 1466 | ((MEMS microelectro\$) near (substrate\$1 nozzle\$1                     | USPAT;               | 2004/08/17 18:41  |
|     |      | chamber\$1))  | EPO; JPO             | 0004/00/47 40:40  |
| -   | 33   | (((MEMS microelectro\$) near (substrate\$1 nozzle\$1                    | USPAT;               | 2004/08/17 18:49  |
|     |      | chamber\$1))) and 347/\$.ccls.  | EPO; JPO             | 0004/00/47 40:50  |
| -   | 1    | 5989445.pn.   | USPAT;               | 2004/08/17 18:52  |
|     | 6    | <br>  ("3921916"   "4455192"   "5308442"   "5385635"   "5585827"        | EPO; JPO<br>USPAT    | 2004/08/17 18:52  |
| -   |      | ( 3921916   4435192   3308442   3363633   3363627  <br>  "5588597").PN. | USFAI                | 2004/00/17 10.32  |
|     | 714  | 347/65.ccls.  | USPAT;               | 2004/08/17 18:53  |
| · . | / 17 | 047700.0015.<br>  | EPO; JPO             | 2004/00/11 10:00  |
| _   | 27   | 347/65.ccls. and "MEMS"   | USPAT;               | 2004/08/23 08:49  |
|     |      | 047700.0010. und MENTO  | EPO; JPO             | 200 1100120 00110 |
| -   | 1    | 5828394.pn.   | USPAT;               | 2004/08/23 08:49  |
| 1   |      | ·· <b>F</b> ···   | EPO; JPO             |                   |
| -   | 1    | 6712986.pn.   | USPAT;               | 2004/08/18 08:14  |
| 1   |      | · ·   | EPO; JPO             |                   |
| -   | 1    | 5828394.pn. and (paper medium sheet)                                    | USPAT;               | 2004/08/18 10:26  |
| 1   |      |   | EPO; JPO             |                   |
| -   | 3871 | 347/\$.ccls. and (piezoelectric same (thermal heat\$3 bubble\$1         | USPAT;               | 2004/08/18 10:27  |
|     |      | actuator\$1))   | EPO; JPO             |                   |
| -   | 3694 | (347/\$.ccls. and (piezoelectric same (thermal heat\$3                  | USPAT;               | 2004/08/18 10:28  |
|     |      | bubble\$1 actuator\$1))) not silverbrook-\$.in.                         | EPO; JPO             | 0004100415 44 55  |
| -   | 420  | ((347/\$.ccls. and (piezoelectric same (thermal heat\$3                 | USPAT;               | 2004/08/18 11:29  |
|     |      | bubble\$1 actuator\$1))) not silverbrook-\$.in.) and (conductive        | EPO; JPO             |                   |
|     | _    | resistive) and (high with coefficient expansion)                        | LICDAT               | 0004/00/40 44:00  |
| -   | 6    | (((347/\$.ccls. and (piezoelectric same (thermal heat\$3                | USPAT;               | 2004/08/18 11:30  |
|     | 1    | bubble\$1 actuator\$1))) not silverbrook-\$.in.) and (conductive        | EPO; JPO             |                   |
|     |      | resistive) and (high with coefficient expansion) ) and                  |                      |                   |
| l . | 18   | serpentine 347/63-65.ccls. and kodak                                    | USPAT;               | 2004/08/18 11:21  |
| 1-  | 18   | OTTIOS-US, COS. AND NOVAK   | EPO; JPO             | 2007/00/10 [1,2]  |
| 1_  | 28   | 347/63-65.ccls. and 347/68-72.ccls.                                     | USPAT;               | 2004/08/18 13:44  |
| 1   | 20   | 0-1700 00.0013. unu 0-1700-12.0013.                                     | EPO; JPO             | 230-110011010.44  |
| 1 - | 1    | (347/63-65.ccls. and 347/68-72.ccls.) and (thermal with                 | USPAT;               | 2004/08/18 11:28  |
| 1   | · .  | actuator\$1)  | EPO; JPO             |                   |
| 1 - | 295  | 347/\$.ccls. and (thermal with actuator\$1) and piezoelectric           | USPAT;               | 2004/08/18 11:29  |
|     |      | and (thermal bubble heat\$3)  | EPO; JPO             |                   |
|     | •    |   | <del></del>          |                   |

| -  | 196  | (347/\$.ccls. and (thermal with actuator\$1) and piezoelectric    | USPAT;            | 2004/08/18 11:29   |
|----|------|---|-------------------|--------------------|
|    |      | and (thermal bubble heat\$3)) and (conductive resistive) and      | EPO; JPO          |                    |
|    |      | (high with coefficient expansion)                                 |                   |                    |
| -  | 1 1  | (((347/\$.ccls. and (thermal with actuator\$1) and piezoelectric  | USPAT;            | 2004/08/18 11:30   |
| 1  |      | and (thermal bubble heat\$3)) and (conductive resistive) and      | EPO; JPO          |                    |
|    |      | (high with coefficient expansion) ) and serpentine) not           | <b></b> . 0, 0. 0 |                    |
|    |      | silverbrook-\$.in.  |                   |                    |
|    | 48   | ((347/\$.ccls. and (thermal with actuator\$1) and piezoelectric   | USPAT;            | 2004/08/18 11:30   |
| -  | 40   |   | EPO; JPO          | 2004/00/10 11:50   |
|    |      | and (thermal bubble heat\$3)) and (conductive resistive) and      | EPO, JPO          |                    |
|    |      | (high with coefficient expansion) ) and serpentine                | LIODAT            | 0004/00/40 40:45   |
| -  | 0    | 347/63-65.ccls. and 347/68-72.ccls. and "PTFE"                    | USPAT;            | 2004/08/18 13:45   |
|    | _    |   | EPO; JPO          |                    |
| -  | 0    | 347/56-65.ccls. and 347/68-72.ccls. and "PTFE"                    | USPAT;            | 2004/08/18 13:45   |
|    |      |   | EPO; JPO          |                    |
| -  | 3    | 347/56-65.ccls. and 347/68-72.ccls. and (thermal near             | USPAT;            | 2004/08/18 13:46   |
|    |      | expansion)  | EPO; JPO          |                    |
| -  | 0    | 347/56-65.ccls. and 347/68-72.ccls. and (high near                | USPAT;            | 2004/08/18 13:47   |
|    |      | coefficient)  | EPO; JPO          |                    |
| _  | 126  | 347/\$.ccls, and piezoelectric and thermal and (high near         | USPAT;            | 2004/08/18 14:09   |
|    | 0    | coefficient)  | EPO; JPO          |                    |
| _  | 13   | (347/\$.ccls. and piezoelectric and thermal and (high near        | USPAT;            | 2004/08/18 13:47   |
|    |      | coefficient)) not silverbrook-\$.in.                              | EPO; JPO          | 200 1700710 10. 71 |
| _  | 5    | 347/\$.ccls. and (high near coefficient near expansion)           | USPAT;            | 2004/08/18 14:12   |
|    | ١    | 1 34774.ccis. and (mgir flear coefficient flear expansion)        | EPO; JPO          | 2004/00/10 14.12   |
|    | 0    | <br>  (thermal near printhead\$1) and (high near coefficient near | USPAT;            | 2004/08/18 14:13   |
| -  | 0    | , , <del>,</del>  |                   | 2004/06/16 14.15   |
|    |      | expansion)  | EPO; JPO          | 2004/00/40 44:42   |
| -  | 0    | printhead\$1 and (high near coefficient near expansion)           | USPAT;            | 2004/08/18 14:13   |
|    |      |   | EPO; JPO          | 0004/00/40 44:44   |
| -  | 1284 | high near coefficient near expansion                              | USPAT;            | 2004/08/18 14:14   |
|    |      |   | EPO; JPO;         |                    |
|    |      |   | DERWENT           |                    |
| -  | 51   | (high near coefficient near expansion) and (347/\$.ccls.          | USPAT;            | 2004/08/18 14:36   |
|    |      | 216/\$.ccls. 29/\$.ccls.)   | EPO; JPO;         |                    |
|    |      |   | DERWENT           |                    |
| -  | 1    | jp404001051a  | USPAT;            | 2004/08/18 14:19   |
|    |      |   | EPO; JPO;         |                    |
|    | 1    |   | DERWENT           |                    |
| -  | 4    | ("4533082"   "4605167"   "4702418"   "5487378").PN.               | USPAT             | 2004/08/18 14:34   |
| -  | 2    | 6543884.pn.   | USPAT;            | 2004/08/18 14:38   |
|    |      |   | EPO; JPO;         |                    |
|    |      |   | DERWENT           |                    |
| -  | 12   | ("4789425"   "4864329"   "4866461"   "4894664"   "5016024"        | USPAT             | 2004/08/18 14:37   |
|    |      | "5198834"   "5322594"   "5463411"   "5489930"   "5638101"         |                   |                    |
|    |      | "5648806"   "5710070").PN.  |                   |                    |
| -  | 695  | 347/65.ccls. not silverbrook-\$.in.                               | USPAT;            | 2004/08/18 14:39   |
|    |      |   | EPO; JPO;         |                    |
|    |      |   | DERWENT           |                    |
| -  | 50   | (347/65.ccls. not silverbrook-\$.in.) and (thermal near           | USPAT;            | 2004/08/18 14:39   |
|    |      | expansion)  | EPO; JPO;         |                    |
|    |      |   | DERWENT           |                    |
| -  | 36   | (347/65.ccls. not silverbrook-\$.in.) and (thermal near           | USPAT;            | 2004/08/18 14:52   |
|    | 1    | expansion near coefficient)                                       | EPO; JPO;         |                    |
| 1  |      | - expandion hour occinolomy                                       | DERWENT           |                    |
| 1_ | 2    | 5877791.pn.   | USPAT;            | 2004/08/18 14:53   |
| 1  | 4    | 30/7/31.pii.  | ,                 | 2007/00/10 14.00   |
| 1  |      |   | EPO; JPO;         |                    |
| 1  |      | 5000445 nn  | DERWENT           | 2004/08/18 14:53   |
| -  | 2    | 5989445.pn.   | USPAT;            | 2004/00/10 14.03   |
|    |      |   | EPO; JPO;         |                    |
|    | L    |   | DERWENT           |                    |